

REMARKS/ARGUMENT

Applicant responds herein to the Office Action dated July 31, 2002. A Petition for Extension of Time (one month) and the fee therefor are enclosed.

As requested, an Abstract has been added into the specification as a separate sheet.

Responsive to the rejection of claims 1-9 under 35 U.S.C. §112, second paragraph, on the grounds noted at paragraph 2 of the Office Action, the applicant responds that claims 2, 6 and 9 have been amended responsive to the Examiner's request.

Relative to claim 1-5, 8 and 9, it is respectfully submitted that the term "sol-like" in fact does not render the claim indefinite, because the applicant is allowed to be his own lexicographer and the applicant adequately defines this term at page 3 of the specification, at lines 16-19.

Without intending to limit the claims, it is noted that the sol-like solution, in accordance with the invention, includes metalorganic material. Such material includes, for example, alkoxide, hydrate or carbonate, where the metal organic contains PZT component. The metalorganic substance is used as a sol-like solution, either singly, in mixing with other material, or in a dissolved state in a solvent. Indeed, a "sol-like solution" can be defined as "a material which can be processed as a solution by the sol-gel process", as referenced in claim 1 as amended. A key term search for "sol-gel" yields 6,276 prior patents which use the well known term. See, e.g., U.S. patent no. 6,485,987. Hence, it is respectfully submitted that the applicant has fully responded to the §112 rejections and reconsideration and withdrawal thereof is requested.

Substantively, claim 8 stands rejected on grounds of obviousness over Danforth, et al. (5,997,795), in view of Clough, et al. (5,756,207). Claims 1-7 and 9 stand rejected on grounds of obviousness over the aforementioned references, further in view of either one of Radford, et al. (5,457,598) or Butler, et al. (5,137,634). Reconsideration of the rejections on art is requested in view of the amendments to the claims herein and the following remarks.

Turning to the cited art, it is initially noted that none of the cited references teach a high density ceramic thick films, whose dimensions as known, range from one to about 200 micrometers, by screen printing to complete or obtain a patterned ceramic thick film without a further patterning processes. The foregoing negates the possibility that any of those references, whether taken singly or in any combination, teaches or suggests the present invention.

More specifically, in referring to the Abstract of the cited art, using solid freeform fabrication techniques, photonic bandgap structures (a kind of ceramic body having a certain shape) are formed. Solid particulate materials are mixed with a binder and, through a computer-control process, are built layer by layer to form the structure. Additionally, in the indirect methods, unfilled polymeric materials are built layer by layer to form a negative mold for the photonic bandgap structure. The cavities within the mold may then be filled with a slurry incorporating solid particulate materials. Subsequent processing may include mold removal, binder removal, densification and secondary infiltration steps to form a photonic bandgap structure having the desired properties.

However, in the above process, since the structure is not a film, it cannot be fabricated by screen printing.

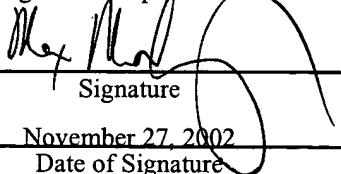
Although the Examiner asserts that it would have been obvious to one skilled in the art to mold the paste of Danforth, et al. by screen printing, in view of the teachings of Clough, et al., applicant respectfully submits that in fact, Clough, et al. teaches a process for coating a substrate with a transition metaloxide, not by screen printing. The only allusion in this primary reference to screen printing appears in the discussion by this reference of the conventional ceramic processing techniques. Therefore the reference itself does not teach the present invention, and certainly not in specific form that is recited in the claims herein.

For the foregoing reasons, it is believed that the claims of record are clearly patentable over the cited references. This certainly applies to independent claim 1 and the more so to the remaining claims which incorporate further features.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

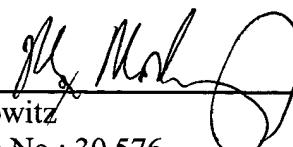
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Asst. Commissioner for Patents, Washington, D.C. 20231, on November 27, 2002

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Signature

November 27, 2002
Date of Signature

Respectfully submitted,



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